

Claims

1. A method of allocating bandwidths in a wireless LAN having a plurality of access points each using the same wireless technology for data communication with users, the method comprising the steps of:-

- a) continuously monitoring bandwidth usage by each of the access points; and
- b) re-allocating bandwidth from a low bandwidth usage access point to a high bandwidth usage access point.

2. A method as claimed in claim 1, wherein the access points each use the 802.11 wireless technology.

3. A method as claimed in claim 2, wherein the 802.11 wireless technology uses DSSS.

4. A method as claimed in claim 3, wherein step b) is such as to re-allocate a first sub-bandwidth of DSSS associated with the low bandwidth usage access point to complement a second sub-bandwidth of DSSS associated with the high bandwidth usage access point, and the method further comprises the step of expanding the coverage of a third access point using the third sub-bandwidth of DSSS for data communication with the users of the access point previously operating under the first sub-bandwidth of DSSS.

5. A method as claimed in claim 2, wherein the 802.11 wireless technology operates under FHSS.

6. A method as claimed in claim 5, wherein step b) is such as to re-allocate at least one FHSS bandwidth channel from the low bandwidth usage access point to the high bandwidth usage access point.

7. A wireless LAN constituted by a plurality of access points each using the same wireless technology for data communication with users, wherein the LAN is provided

with means for continuously monitoring bandwidth usage by each of the access points, and for re-allocating bandwidth from a low bandwidth usage access point to a high bandwidth usage access point.

5 8. A LAN as claimed in claim 7, wherein the access points each use the 802.11 wireless technology.

9. A LAN as claimed in claim 8, wherein the 802.11 wireless technology uses DSSS.

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10. A LAN as claimed in claim 9, wherein the monitoring and re-allocation means is such as to re-allocate a first sub-bandwidth of DSSS associated with the low bandwidth usage access point to complement a second sub-bandwidth of DSSS associated with the high bandwidth usage access point, and said means is such as to
15 expand the coverage of a third access point using the third sub-bandwidth of DSSS for data communication with the users of the access point previously operating under the first sub-bandwidth of DSSS.

11. A LAN as claimed in claim 8, wherein the 802.11 wireless technology operates
20 under FHSS.

12. A LAN as claimed in claim 11, wherein the monitoring and re-allocation means is such as to re-allocate at least one FHSS bandwidth channel from the low bandwidth usage access point to the high bandwidth usage access point.

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13. A method of allocating bandwidths in a wireless LAN having a plurality of access points each using the 802.11, DSSS wireless technology for data communication with users, the method comprising the steps of:-

- 30 a) continuously monitoring bandwidth usage by each of the access points; and
b) re-allocating bandwidth from a low bandwidth usage access point to a high bandwidth usage access point; wherein

step b) is such as to re-allocate a first sub-bandwidth of DSSS associated with the low bandwidth usage access point to complement a second sub-bandwidth of DSSS associated with the high bandwidth usage access point, and the method further comprises the step of expanding the coverage of a third access point using the third sub-bandwidth of DSSS for data communication with the users of the access point previously operating under the first sub-bandwidth of DSSS.

14. A method of allocating bandwidths in a wireless LAN having a plurality of access points each using the 802.11, FHSS wireless technology for data communication with users, the method comprising the steps of:-

- a) continuously monitoring bandwidth usage by each of the access points; and
- b) re-allocating bandwidth from a low bandwidth usage access point to a high bandwidth usage access point; wherein

step b) is such as to re-allocate at least one FHSS bandwidth channel from the low bandwidth usage access point to the high bandwidth usage access point.

15. A wireless LAN constituted by a plurality of access points each using 802.11, DSSS wireless technology for data communication with users, wherein the LAN is provided with means for continuously monitoring bandwidth usage by each of the access points, and for re-allocating bandwidth from a low bandwidth usage access point to a high bandwidth usage access point; and wherein the monitoring and re-allocation means is such as to re-allocate a first sub-bandwidth of DSSS associated with the low bandwidth usage access point to complement a second sub-bandwidth of DSSS associated with the high bandwidth usage access point, and said means is such as to expand the coverage of a third access point using the third sub-bandwidth of DSSS for data communication with the users of the access point previously operating under the first sub-bandwidth of DSSS.

16. A wireless LAN constituted by a plurality of access points each using 802.11, FHSS wireless technology for data communication with users, wherein the LAN is provided with means for continuously monitoring bandwidth usage by each of the access points, and for re-allocating bandwidth from a low bandwidth usage access point

to a high bandwidth usage access point; and wherein the monitoring and re-allocation means is such as to re-allocate at least one FHSS bandwidth channel from the low bandwidth usage access point to the high bandwidth usage access point.